

1 **CLAIMS**

2 1. A method comprising:

3 identifying multimedia elements having a linear time-code number;

4 adding a prefix value to linear time-code numbers of each identified

5 multimedia element; and

6 adding suffix values to the linear time-code numbers of each identified

7 multimedia element.

8

9 2. The method of claim 1 wherein the multimedia elements comprise

10 audio video elements and interspersed elements.

11

12 3. The method of claim 1 wherein the prefix value comprises a title

13 value.

14

15 4. The method of claim 1 wherein the suffix values comprise language

16 value, angle value, and parental block value.

17

18 5. The method of claim 1 wherein linear time-code numbers with

19 prefix and suffix values are resident in a time map table that associates the

20 multimedia elements to linear time-code numbers.

21

22 6. The method of claim 5 wherein the time map is used by a DVD

23 player to point to particular sectors on a DVD disc containing content representing

24 the multimedia elements.

1 7. The method of claim 5 wherein the time map table is part of a file
2 that provides pointers to data structures in a medium.

3
4 8. A DVD player that implements the method of claim 7, and wherein
5 the medium is a DVD disc.

6
7 9. A broadcast point that performs the method of claim 1.

8
9 10. A multimedia device that performs the method of claim 1.

10
11 11. The method of claim 1 further comprising identifying elements
12 without a linear time-code number, and adding a linear time-code to the identified
13 elements without a linear time-code.

14
15 12. The method of claim 11 wherein the elements are interspersed
16 between audio video elements that have linear time-code numbers.

17
18 13. A method comprising:
19 identifying a title value describing a particular multimedia presentation
20 content comprised of multimedia elements described by extended time-code
21 numbers; and

22 searching for particular multimedia elements based on their extended time-
23 code numbers.

1 14. The method of claim 13 wherein the extended time-code numbers
2 comprise a prefix and suffixes.

3
4 15. The method of claim 13 wherein the searching is performed based
5 on the prefix and on one or more of the suffixes.

6
7 16. The method of claim 13 wherein the suffixes comprise angle,
8 language, and parental block.

9
10 17. The method of claim 13 wherein the searching is performed based
11 on a time map table that associates multimedia elements with extended time-code
12 numbers.

13
14 18. A DVD player that implements the method of claim 17.

15
16 19. A personal video recorder that implements the method of claim 17.

17
18 20. The method of claim 17 wherein the time map table is part of an
19 information file that provides navigation and presentation information for titles in
20 a medium.

21
22 21. A DVD player that implements the method of claim 20, wherein the
23 medium is a DVD disc.

24
25 22. A personal video recorder that implements the method of claim 20.

1
23. A multimedia device that performs the method of claim 13.

3
4
24. A multimedia player that performs the method of claim 13.

5
6
25. A method comprising:

7 receiving multimedia elements with a linear time-code;

8 receiving multimedia elements without a linear time-code;

9 attaching linear time-codes; and

10 synchronizing all multimedia elements based the unique linear time-codes.

11
12
26. A broadcast point that performs the method of claim 23.

13
14
27. A multimedia device that performs the method of claim 23.

15
16
28. A multimedia player that performs that method of claim 23.

17
18
29. A method comprising:

19 extending an information file in a DVD to provide added functionality in

20 describing content stored on the DVD, and

21 providing navigation and presentation information from the information file

22 for playback of various titles.

1 30. The method of claim 29 wherein the extending the information file is
2 performed by extended time-code numbers that describe sequencing of the
3 content.

4

5 31. The method of claim 29 wherein the extending the information files
6 adds a time map table that describes sequencing of the content.

7

8 32. The method of claim 29 wherein the extending the information files
9 is performed by receiving information describing the added functionality from a
10 separate source from the DVD.

11

12 33. A multimedia device comprising:
13 a processor;
14 a multimedia storage module executable on the processor and configured to
15 store multimedia presentation content comprising of multimedia elements; and
16 an extended time-code number module executable on the processor
17 configured to append extended time-code numbers to multimedia element without
18 a time-code number.

19

20 34. The multimedia device of 33 further comprising a multimedia player
21 module executable on the processor and configured to play the audio/video
22 element and interspersed elements.

1 35. The multimedia device of claim 33 wherein the multimedia player is
2 configured to search for audio/video element and interspersed elements based on
3 extended time-code numbers.

4

5 36. The multimedia device of claim 33 further comprising a multimedia
6 player.

7

8 37. The multimedia device of claim 33 wherein the multimedia device is
9 a DVD player.

10

11 38. The multimedia device of claim 33 wherein the multimedia device is
12 a personal video recorder.

13

14 39. A computer-readable medium having stored thereon a data-structure
15 comprising:

16 a first data field containing a title value;
17 a second data field containing a time-code value; and
18 a third data field containing a suffix value.

19

20 40. A system comprising:
21 a broadcast point providing multimedia elements; and
22 a multimedia device that receives the multimedia elements, wherein the
23 multimedia device further receives extended time-code numbers associated with
24 each multimedia element.

1 41. The system of claim 40 wherein the extended time-code numbers are
2 provided by the broadcast point.

3
4 42. The system of claim 40 wherein the extended time-code numbers are
5 provided by a web site.